

ERIOPHYID STUDIES B -19

by H. H. KEIFER

Bureau of Entomology

California Department of Agriculture

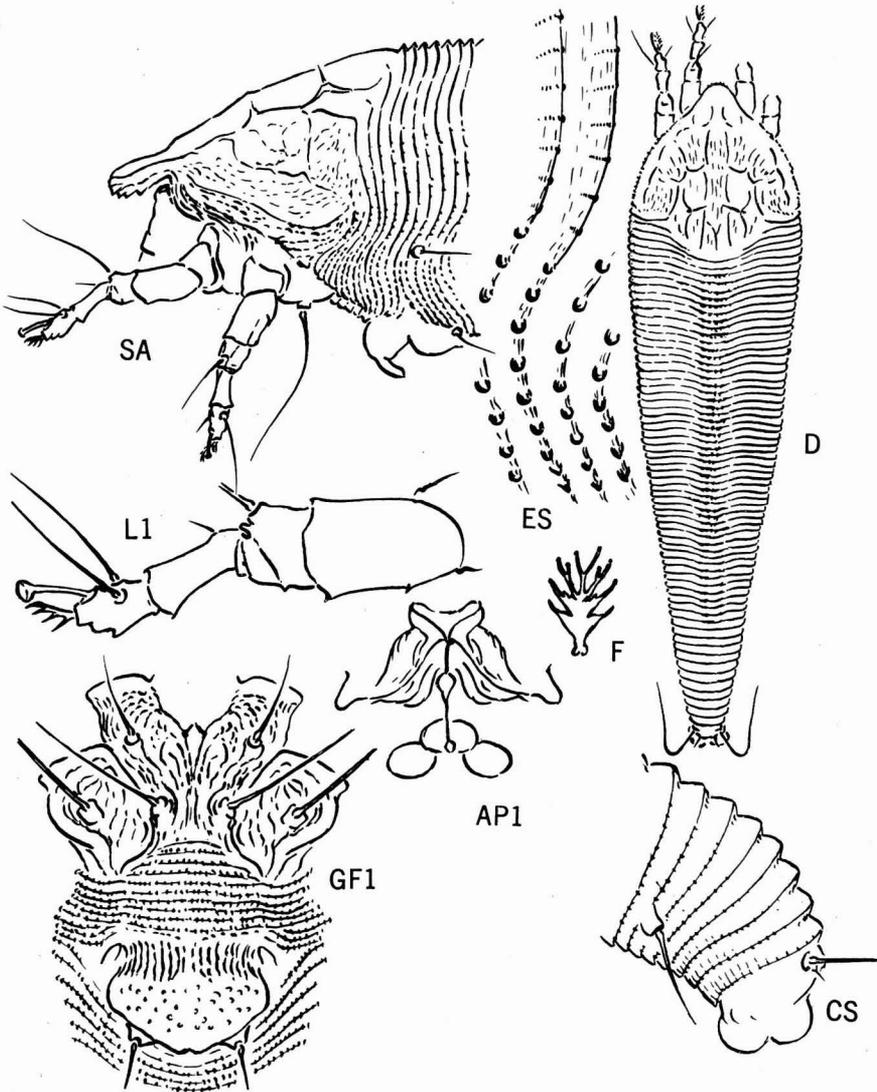


Plate 1 - *Leipothrix solidaginis*, new species

ISSUED - July 19, 1966

Leipothrix, new genus

This genus name is established to receive a species that has the central longitudinal ridge of Epitrimerus, but the legs lack the femoral setae. Otherwise the genotype would go into Epitrimerus.

Genotype - Leipothrix solidaginis, new species

Leipothrix solidaginis, new species

Plate 1

Female 180 μ -230 μ long, 66 μ wide, 50 μ thick; elongate-spindleform; color in life orange. Rostrum 30 μ long, projecting down; antapical seta 15 μ long, strong and prominent. Shield 55 μ long, 66 μ wide, with a moderate anterior lobe over rostrum, the edge of the lobe wrinkled and rough. Shield surface with many lines and short dashes; median line absent except possibly at rear; admedian lines nearly complete, curved and broken, subparallel, branching to upper lateral line at anterior 1/4, giving off lateral line at 1/2; remnants of a submedian running back on outer side of dorsal tubercles from about 1/2 point on shield. Laterally the shield with numerous short dashes above the margin, below which are lines of granules, the margin more or less granular; some partial rings above hind coxa. Dorsal tubercles 17 μ apart; dorsal seta 5 μ long, projecting up and centrad. Forelegs 37 μ long; tibia 9 μ long, with 3 μ seta at about 1/4; tarsus 7 μ long; claw 6 μ long, nearly straight, with strong knob; featherclaw 4-rayed. Hindleg 35 μ long, tibia 7 μ long, tarsus 6 μ long, claw 5 μ long. Coxal surface heavily lined; anterior coxae broadly connate but sternal line not in evidence; first setiferous coxal tubercles farther apart than second tubercles and slightly behind anterior coxal approximation; second tubercles about on a line across third tubercles. Abdominal thanosome with about 48 tergites and 80 sternites; dorsal ridge fading to rear but reaching nearly to telosome. Microtubercles bead-like on sternal margins, finer and somewhat elongate on tergites, fading dorsally but with some more discernable ones on middorsal ridge. Lateral seta 13 μ long, on about sternite 9; first ventral seta 35 μ long, on sternite 28; second ventral 17 μ long, on sternite 57. Telosome with 6-7 rings the microtubercles on margins with anterior elongations laterally and strongly so ventrally, fading dorsally; seta 25 μ long. Accessory seta 4 μ long. Female genitalia 22 μ wide, 18 μ long; coverflap with close-set longitudinal lines basally and the main part granular; seta 15 μ long.

Type locality: Phillips, El Dorado County, Cal., the elevation about 6500 ft
Collected: August, 25, 1964, by the writer

Host: Solidago californica Nutt. (Compositae) goldenrod

Relation to host: the mites are undersurface rust mites on the leaves

Type material: there are 12 slides and dry leaves bearing these mites
one slide with the above data is designated as type
the other slides are paratypes

The genotype of Epitrimerus Nalepa, 1898

In Das Tierreich, 1898, Nalepa, who had found that his 1892 name, Trimerus, was already in use in the Crustacea, substituted Epitrimerus for his original name (Trimerus). The writer, in 1938, found no designated genotype for Epitrimerus, and utilized the first name in Das Tierreich (1898) for that purpose. This was the species gemiccola Nal.

Richard A. Newkirk, of the U. S. Agricultural Research Service has recently pointed out to the writer that a substituted name can only utilize a species as its genotype if it was included in the publication which originally assigned species under the rejected name. The name gemiccola was not one of the original names placed in Trimerus by Nalepa.

Nalepa assigned three specific names to Trimerus in 1892. They were all his species and were: acromius, piri, and trinotus. These are, then, the only species available as genotypes for Epitrimerus.

This note therefore designates piri Nal. as the genotype of Epitrimerus.

(continued)

(genotype of Epitrimerus)

This designation does not alter the present conception of Epitrimerus since piri has a simple 4-rayed featherclaw. On the other hand acromius and trinetus have divided featherclaws and can be separated into two other genera. In other words, the three species represent three generic concepts.

The writer is indebted to Mr. Newkirk for this information.

References: 1892 - Trimerus Nalepa, Anz. Ak. Wien 29:155
1898 - Epitrimerus Nalepa, Das Tierreich 4: 61
1938 - Epitrimerus Nal., Keifer, Bul.Cal.Dept.Agr. 27:308
gemmicola designated as genotype
Code reference - Article 67 (1)

Epitrimerus santaluciae, new species

Plate 2

The host of this Eriophyid is Santa Lucia fir, Abies bracteata. This fir is a very distinct species in the genus Abies, and has a restricted natural range in the Santa Lucia mountains on the central California coast. But the Epitrimerus inhabiting the needles of Santa Lucia fir is congeneric with the vagrant species on the needles of white fir, Abies concolor (G.&G.). As far as the writer knows white fir and Santa Lucia fir do not range close to each other. On the other hand white fir and red fir (Abies magnifica A.) are associated closely in many parts of the California mountains. But the vagrant on red fir is Nalepella ednae K., a Phytoptid not related to the white fir mite. This peculiar discontinuity in Eriophyid-host relationships does not bear out botanical taxonomy.

The white fir mite is Epitrimerus abietis K. It differs from santaluciae by the 5-rayed featherclaw, shorter tibiae, and by the two ranks of longitudinal ribs on the female genital coverflap.

Female (santaluciae) 175 μ -190 μ long, 55 μ wide, 40 μ thick; fusiform, the body somewhat attenuate toward rear; color light yellowish-white. Rostrum large, somewhat recurved, 52 μ -55 μ long; antapical seta 12 μ long. Shield 68 μ long, 61 μ wide; anterior lobe over rostrum broad, somewhat indented in anterior center, and with a transverse ridge. Shield design of curved lines: median line absent; admedians faint but complete, curved and recurved, branching laterally at about 1/2 and again at 3/4, with a cross connecting line near rear shield margin. Central disc of shield outlined by strong submedian lines, curving back from lateral base of anterior lobe, running just inside dorsal tubercles and joining at rear margin. Shield rather prominently convex laterally, with a line above lateral margin, and margin somewhat granular. Dorsal tubercles near rear margin, 27 μ apart; dorsal setae 3 μ long, projecting up. Forelegs 45 μ long; tibia 15 μ long, with 9 μ seta from about 2/3; tarsus 9 μ long; claw 8 μ long, curved, knobbed; featherclaw 4-rayed. Hindleg 40 μ long, tibia 10 μ long, tarsus 8 μ long, claw 8 μ long. Coxae ornamented with some lines and outlines; anterior coxae strongly diverging, with broad sternal mark and coxae granular on each side; first setiferous coxal tubercles well ahead of anterior coxal approximation & farther apart than second; second coxal tubercles but little ahead of line across third tubercles. Abdominal thanosome with about 41 tergites and 73 sternites, the central ridge broad anteriorly and tapering back, fading on about the 29th tergite. Tergites with faint microtubercles on margins. Sternites with bead-like microtubercles on margins. Lateral seta 24 μ long, on about sternite 9 behind shield; first ventral seta 55 μ long, on sternite 28; second ventral 35 μ long, on sternite 48. Telosome with about 6 rings, microtubercles elongate below, as fine points on margins above; seta 28 μ long. Accessory seta 5 μ long. Female genitalia 29 μ wide, 16 μ long; coverflap with central basal area bearing fine longitudinal dashes; the apical margin with no prominent marks; seta 22 μ long.

Type locality: 1/2 mile west of China Camp, in Miller Canyon, northern Monterey County, Cal.

Collected: November 6, 1965, by J. P. Keifer and the writer

Host: Abies bracteata (D. Don) (Pinaceae) Santa Lucia fir

Relation to host: the mites are needle vagrants

Type material: there are 11 slides bearing mites with the above data
the type slide is marked, the others are paratype slides

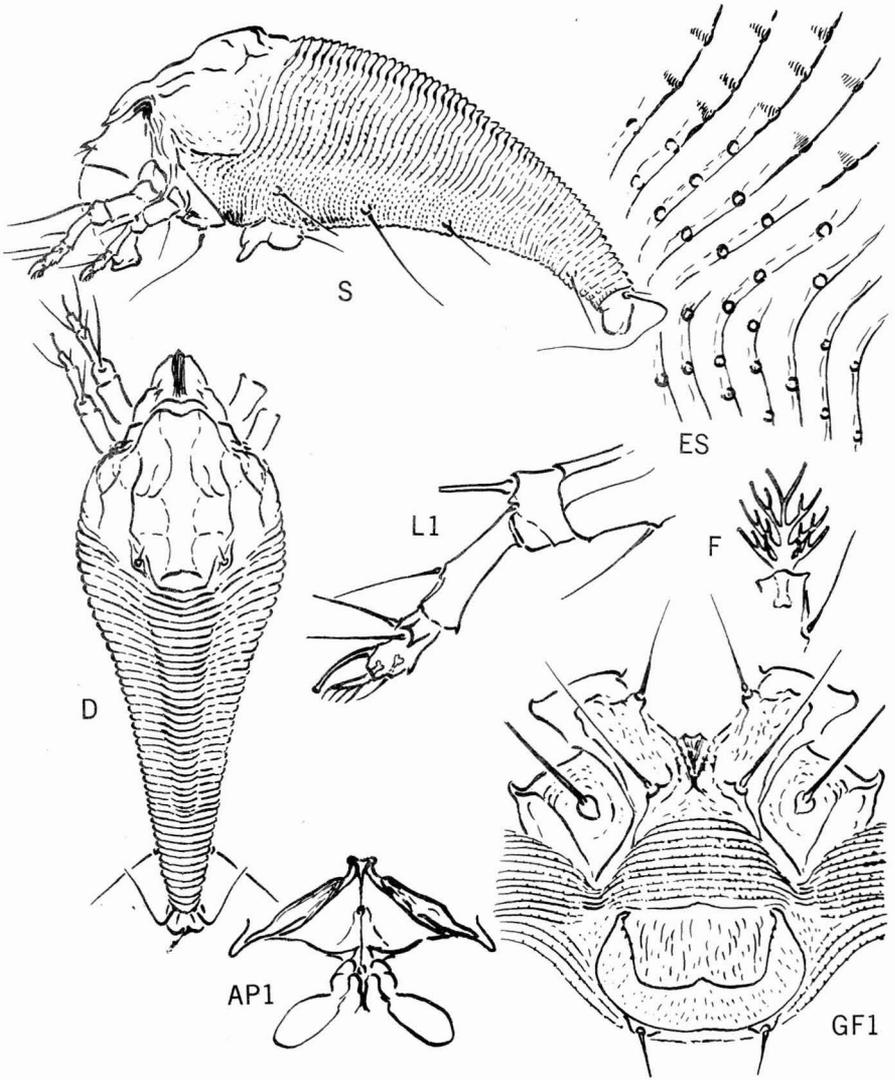


Plate 2 - *Epitrimerus santaluciae*, new species

Epitrimerus chilesi, new species

Plate 3

The characters of this species are: broad non-microtuberculate tergites, a pair of small anterior shield lobe spines similar to the more typical *Aculus* spp., and the 4-rayed featherclaw. We have here, then, an assembly of species referred to *Epitrimerus*, that range all the way from the kinds with numerous narrow and heavily microtuberculated tergites, such as the genotype, to this species with broad tergites. Perhaps this is logical as no way to regroup the species to separate narrow from broad tergite forms is yet clear.

Female 145 μ -160 μ long, 50 μ wide, 40 μ thick; fusiform; color light brownish. Rostrum 31 μ long, projecting down; antapical seta 7 μ long. Shield 47 μ long, 48 μ wide; shield design partially discernable: median line faint or absent; admedians curving back from sides of central part of anterior lobe, sinuate, gradually diverging, farthest apart between dorsal tubercles and recurving at rear margin. A more or less distinct submedian line running back to dorsal tubercles, a lateral line below that branching from admedian at base of anterior lobe and ending before rear margin. Shield laterally with moderate side lobes and some longitudinal lines and partial rings above coxae. Dorsal tubercles 21 μ apart; dorsal setae 9 μ long. Foreleg 30 μ long; tibia 8 μ long, with 5 μ seta at 1/3; tarsus 6 μ long; claw 7 μ long; large knob; featherclaw simple, 4-rayed. Hindleg 28 μ long, tibia 6 μ long, tarsus 6 μ long, claw 7 μ long. Coxae with little ornamentation, the anterior coxae broadly connate and with sternal line between; first setiferous coxal tubercles farther apart than second and slightly ahead of anterior coxal approximation; second tubercles a little ahead of line across third tubercles. Abdominal thanosome with about 17 tergites and 47 sternites; tergites broad and not possessing microtubercles. Sternites with microtubercles bead-like on margins. Lateral seta 16 μ long, on about sternite 7; first ventral seta 24 μ long, on sternite 18; second ventral 13 μ long, on sternite 34. Telosome with 5 rings below and 3-4 above, the microtubercles absent above; seta 16 μ long. Accessory seta 5 μ long. Female genitalia 19 μ wide, 16 μ long; area in front of genitalia and between coxae with faint or no partial rings; female coverflap with faint longitudinal dashes basally and about 6 short longitudinal ribs on rear part; seta 12 μ long.

Type locality: Chiles Valley district, Napa County, California

Collected: August 14, 1952, by the writer

Host: *Cercocarpus betuloides* Nutt. (Rosaceae) mountain mahogany

Relation to host: the mites are underside leaf vagrants, usually remaining fixed.

Type material: twelve slides bear the above data
one is designated the type
the others are paratypes

In addition to the above two slides are of this mite collected above Paynes Creek, on this host, in eastern Tehama County, Cal., Sept. 12, 1962; collected by the writer.

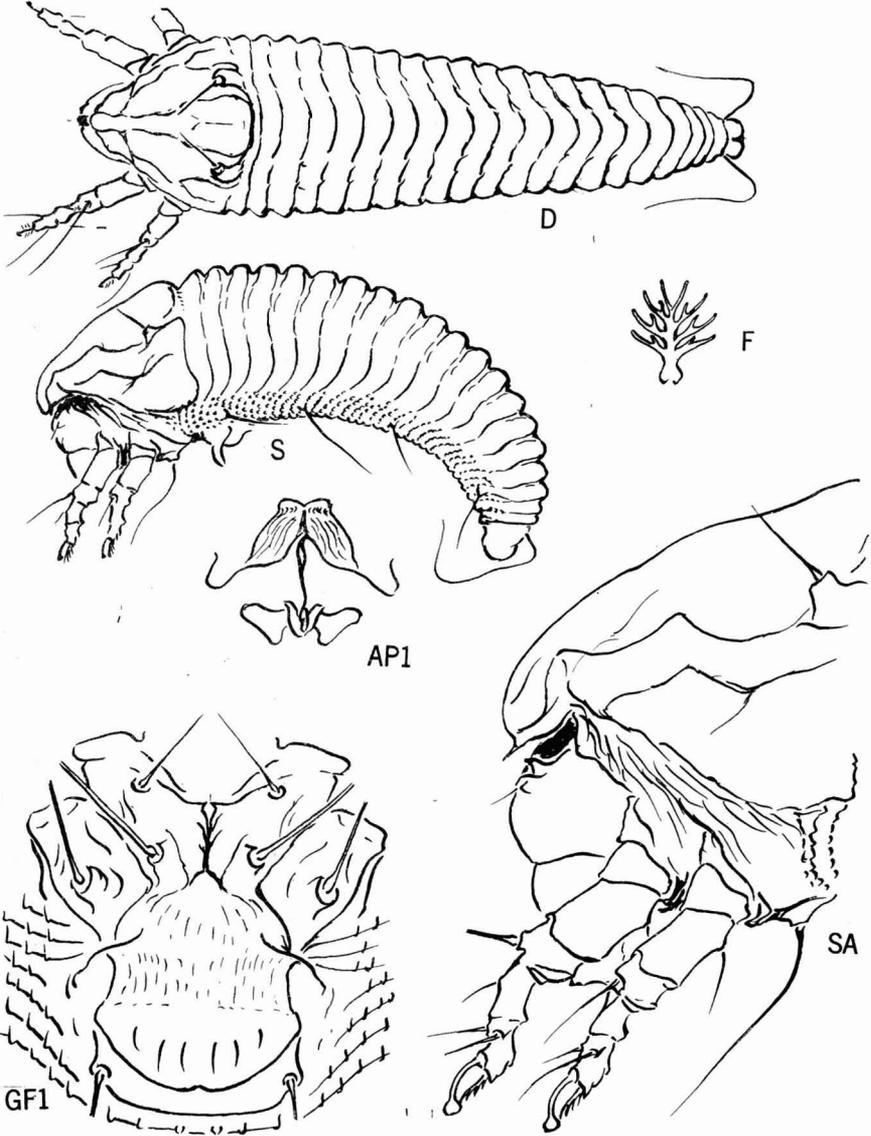


Plate 3 - *Epitrimerus chilesi*, new species

Tetra eldoradensis, new species

Plate 4

This is the first *Tetra* with 4-rayed featherclaws described by the writer. It does not seem particularly close to other members of the genus.

Female 140 μ -160 μ long, 55 μ wide 40 μ thick; flattened-fusiform; color in life orange. Rostrum 24 μ long, projecting down; antapical seta 6 μ long. Shield 36 μ long, 50 μ wide, subtriangular in anterior dorsal outline with a prominent lobe over rostrum. Median shield line discernable on rear 1/2, connected to admedians by cross lines at just beyond 1/2 and ahead of rear margin. Admedian line complete, curving back from near front of anterior lobe, branching at 1/4 to lateral line, branching again at about 2/3 to a line running diagonally across in front of dorsal tubercle, diverging at rear when branching to line extending inward to median. A submedian line from upper lateral line at about 1/3 and extending back to line across in front of dorsal tubercle. Side of shield with some granules above coxae and 2 or 3 partial rings. Dorsal tubercles 25 μ apart, directing setae divergently backward; dorsal setae 8 μ long. Forelegs 26 μ long; tibia 5.5 μ long, with 5 μ seta at about 1/4; tarsus 5 μ long; claw 6 μ long, curved down; featherclaw 4-rayed, occasionally 5. Hindleg 23 μ long, tibia 4 μ long, tarsus 5 μ long, claw 5 μ long. Coxae ornamented with lines and granules; anterior coxae divergent with strong sternal line between; first setiferous coxal tubercles slightly farther apart than second and a little ahead of anterior coxal approximation; second tubercles a little ahead of line across third tubercles. Abdominal thanosome with about 32 tergites and 50 sternites, the broad dorsal trough extending back to the telosome. Microtubercles fine and when present, on ring margins, tending to fade dorsally where they are not detectable. Lateral seta 21 μ long, on about sternite 7 behind shield; first ventral seta 55 μ long, on sternite 19; second ventral 15 μ long, on sternite 33. Telosome with 6 rings, completely microtuberculate, these structures pointed and projecting from ring margins above, elongate below; seta 20 μ long. Accessory seta 5 μ long. Female genitalia 20 μ wide, 15 μ long; coverflap with prominent basal granular cross lines and 10-12 longitudinal ribs; seta 15 μ long.

Type locality: near Rescue, El Dorado County, California

Collected: August 25, 1965, by Magdalena Briones and the writer

Host: *Ceanothus palmeri* Trel. (Rhamnaceae) *ceanothus*

Relation to host: the mites are undersurface leaf vagrants or rust mites

Type material: there are six slides with mites bearing the above data
a type slide is selected
the rest are paratypes

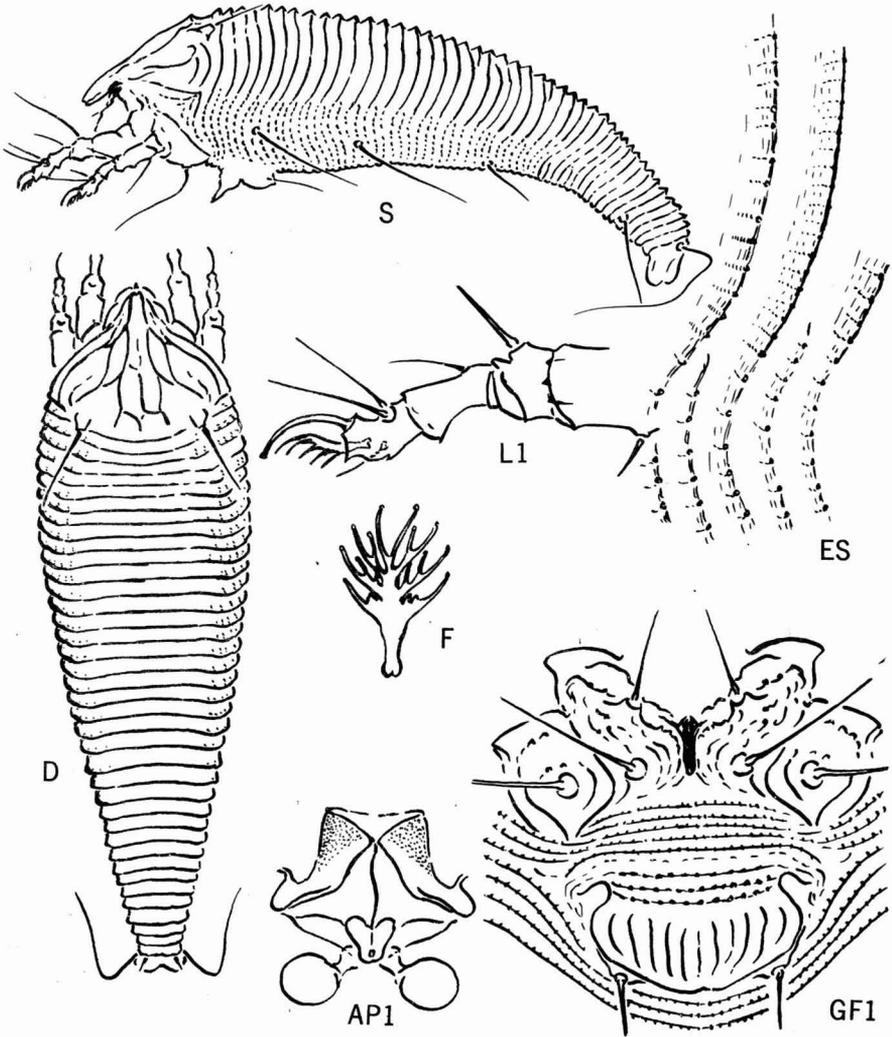


Plate 4 - *Tetra eldoradensis*, new species

Phyllocoptes neenachensis, new species

Plate 5

The combination of a pointed anterior shield lobe and 4-rayed featherclaw, distinguishes this mite from others so far described in North America.

Female 145 μ -195 μ long, 45 μ thick; elongate-fusiform; color in life light yellowish-white. Rostrum 25 μ long, projecting down; antapical seta 10 μ long. Shield 40 μ long 43 μ wide; subtriangular in anterior outline. Anterior shield lobe small, thin, scutely pointed. Shield design of more or less obscure lines and granules; median line obsolete; admedians curving back from sides of acute anterior lobe, faint for most of distance to rear margin, bearing some granules, dividing between dorsal tubercles, the inner branch of each meeting at rear margin. Submedian line from sides of anterior lobe base, sinuate, looping out at about 1/3 and receiving faint lines from admedian, curving in and recurving back to dorsal tubercles. Upper lateral line from submedian at 1/3, receiving two or more lines from below and enclosing rear line between itself and dorsal tubercles. Lines of granules above coxae. Dorsal tubercles 19 μ apart, their axes longitudinal, the rear end touching rear shield margin. Dorsal setae about 10 μ long, projecting up and centrad. Foreleg 36 μ long; tibia 8 μ long with 9 μ seta at 1/3; tarsus 9 μ long; claw 9 μ long, slender; featherclaw 4-rayed. Hindleg 34 μ long, tibia 7 μ long, tarsus 8 μ long, claw 10 μ long. Coxae ornamented with lines of granules; anterior coxae with moderately long sternal line between; first setiferous coxal tubercles farther apart than second and a little behind anterior coxal approximation; second tubercles ahead of line across third tubercles. Abdominal thansome with about 60 rings, the dorsum and venter approximately equal. Microtubercles on ring margins dorsally where they are larger and more produced, tending to be a little ahead of ring margins ventrally at mid-abdomen. Dorsally toward rear the microtubercles becoming progressively more spine-like. Lateral seta 48 μ long, on about ring 9 behind shield; first ventral 55 μ long, on ring 23; second ventral 30 μ long, on ring 43. Telosome with 7 rings, the microtubercles spine-like dorsally, as small beads on ring margins laterally with slight anterior elongations, and elongate ventrally. Telosomal seta 25 μ long. Accessory seta 4 μ long. Female genitalia 21 μ wide, 15 μ long; coverflap with 10-12 irregular longitudinal ribs and basally with two coarsely granular cross lines, sinuate; seta 44 μ long.

Type locality: Neenach, Los Angeles County, Cal. (This is in the Antelope Valley, west of Lancaster.)

Collected: April 19, 1966 by W. Dyer and D. Ferrel, and sent me by Don Estes.

Host: Oenothera deltoides T. & F. (trichocalyx) (Onagraceae) evening primrose

Relation to host: the mites are vagrant among the leaf hairs

Type material: dry plant parts with mites, bearing the above data four slides, one marked type, the others paratypes

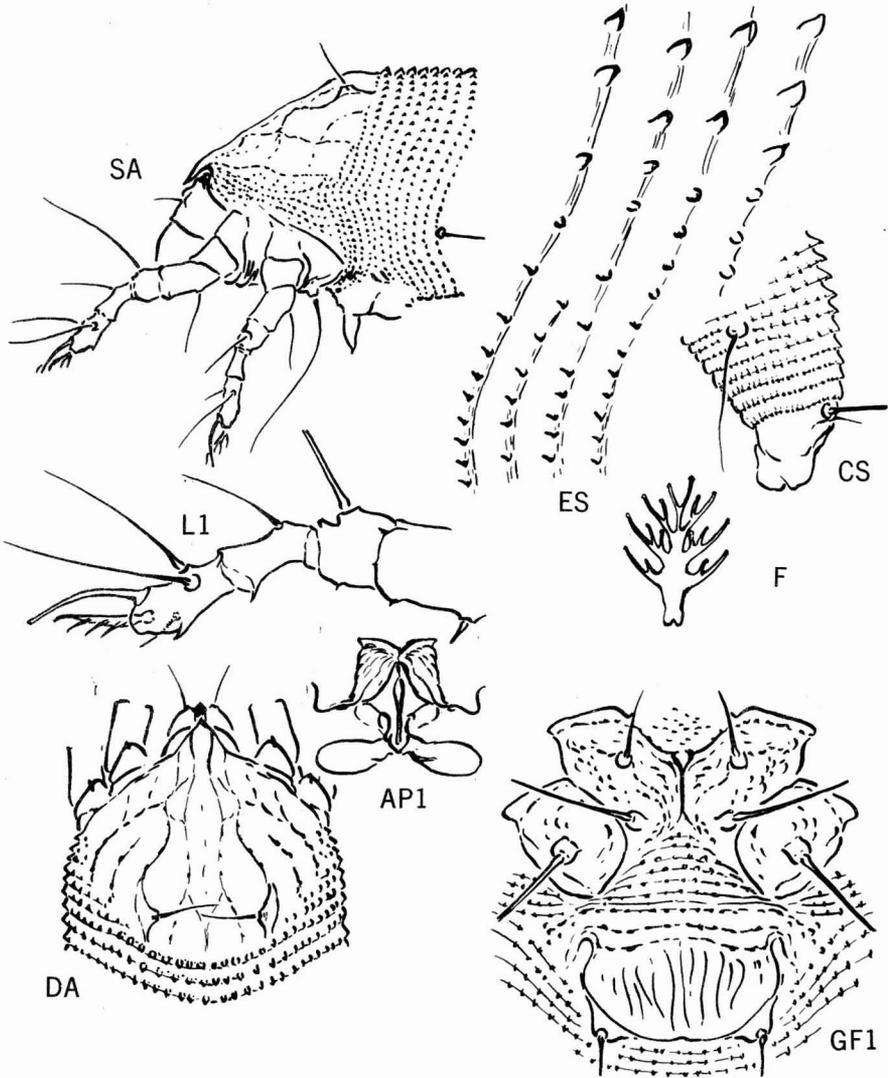


Plate 5 - *Phyllocoptes neenachensis*, new species

Vasates tucsonensis, new species

Plate 6

The reason for putting this species in Vasates is that the dorsal tubercles are arranged with anteriorly converging axes as on the genotype of Vasates, which is quadripedes Shimer. Actually the new species is not close to quadripedes and probably indicates convergence rather than relationship. The new species has a 4-rayed featherclaw and lives on the fruit of creosote bush. Vasates quadripedes is the bladder gallmite of various eastern maples.

Female 120 μ -140 μ long, 40 μ thick; robust-fusiform; color light yellowish-white. Rostrum 22 μ long; antapical seta 6 μ long, moderately strong. Shield 36 μ long, 43 μ wide; a short broad lobe over rostrum, declivitous apically in side view. Shield design faint on many specimens: median line not apparent except toward rear; admedians complete, curving back from side-center of anterior lobe, sinuate, meeting a cross line at 1/4, meeting another cross line at 1/2, curving out and slightly back to 3/4, then forming a recurving arc to rear margin, enclosing centrad curving lines in rear disc. First submedian line from lateral base of anterior lobe curving back across two transverse lines and ending just lateral to dorsal tubercle. Some faint lateral lines on shield and granular lines and bands around lateral shield lobes and above coxae. Dorsal tubercles 21 μ apart; dorsal setae 7 μ long, projecting dorsocentrad. Forelegs 25 μ long; tibia 4.5 μ long, stocky, with 5 μ seta at 1/4; tarsus 4.5 μ long; claw 6 μ long; featherclaw 4-rayed. Hindleg 24 μ long, tibia 3.5 μ long, tarsus 6 μ long, claw 6 μ long. Coxae ornamented with curved lines and some granules; anterior coxae rather strongly diverging and with short sternal line between. First setiferous coxal tubercles farther apart than second and about opposite anterior coxal approximation; second tubercles a little ahead of line across third setiferous coxal tubercles. Abdominal thanosome with about 22 tergites and 40 sternites; elongate microtubercles reaching ahead from rear margins of both tergites and sternites; dorsal microtubercles rather strong. Lateral seta 22 μ long, on sternite 6; first ventral 40 μ long, on sternite 15; second ventral 16 μ long, on sternite 26. Telosome with 5 rings; microtubercles thin, extending ahead from margins; seta 16 μ long. Accessory seta 2 μ long. Female genitalia 23 μ wide, 13 μ long; coverflap with about 12-14 ribs which tend to converge to rear; seta 40 μ long.

Type locality: three miles south of Robles, Arizona, south of Tucson

Collected: December 4, 1962, by the writer

Host: Larrea divaricata Cav. (Zygophyllaceae) creosote bush

Relation to host: the mites were found on the hairy fruits lying at the base of the hairs. There were two species of mites present on these fruits, the new species and Aceria larreae (K.). The latter species was more numerous.

Type material: a type slide with the above data
seven paratype slides

Note: several mites are on each slide and these are a mixture of the new species and Aceria larreae. This Aceria differs from the Vasates by having much less dorsoventral differentiation, bead-like microtubercles, more rays on the featherclaw, a clearer shield design on the average, and by having the dorsal setae diverging to the rear.

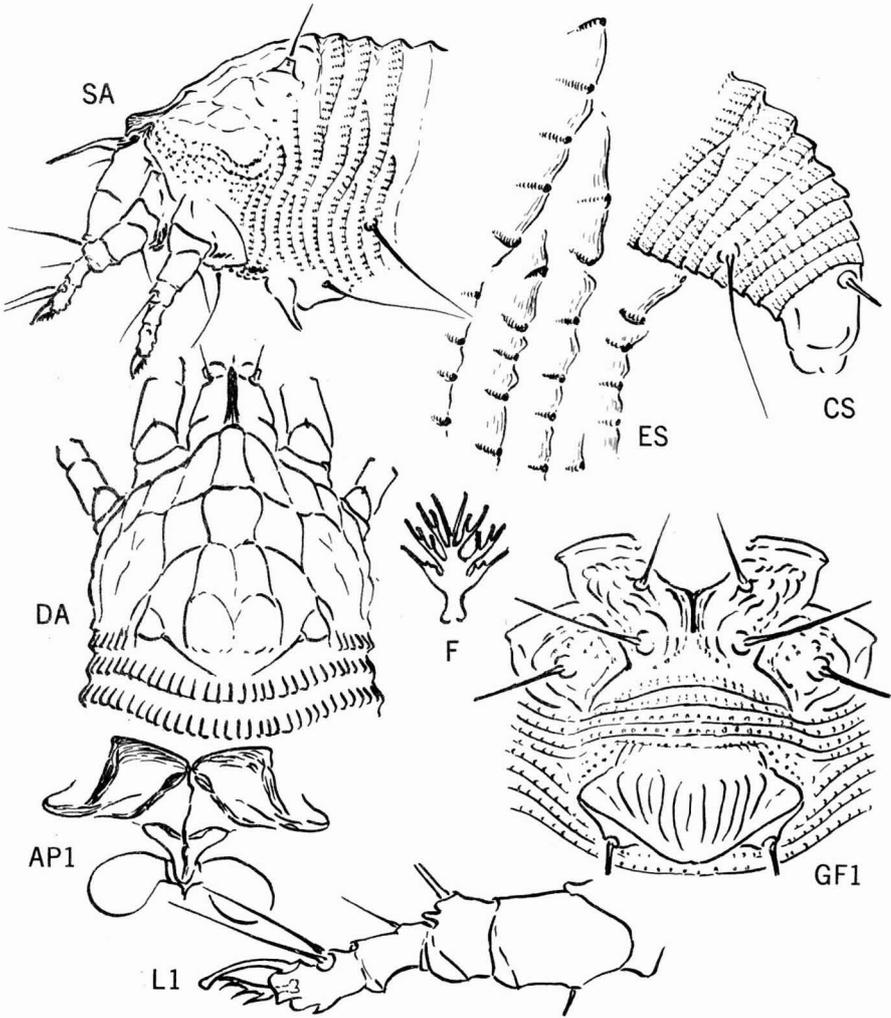


Plate 6 - *Vasates tucsonensis*, new species

Aceria pongamiae, new species

Plate 7

Three features distinguish this mite: first, the admedian lines, which are subparallel, meet at the rear shield margin in an acute angle; second, the featherclaw is 7-rayed; third, the outer surfaces of the femora are roughened.

Female 165 μ -180 μ long, 38 μ thick; wormlike in shape; color evidently light yellowish-white. Rostrum 20 μ long, curved down; antapical seta 4 μ long. Shield 25 μ long, 33 μ wide; median line obscure. Admedian shield lines complete, subparallel, moderately close, farthest apart just before 1/2, meeting in an acute point at rear margin. Submedian lines springing from anterior shield margin just laterad to admedian, extending back diagonally outward and at about 1/2 curving centrad and forming a diagonally directed inward line past in front of dorsal tubercle and ending at rear margin lateral of acute point of admedians. Shield with numerous short dashes, especially laterally, with some granulations above coxae and partial rings below dorsal tubercles. Dorsal tubercles 20 μ apart, dorsal setae 13 μ long. Foreleg 24 μ long; femur with roughened exterior; tibia 4 μ long, with 3.5 μ seta at 1/2; tarsus 6 μ long; claw 5 μ long; featherclaw 7-rayed. Hindleg 22 μ long, femur laterally roughened; tibia 3 μ long, tarsus 5 μ long; claw 7 μ long. Coxae with granulations; anterior coxae with no sternal line between; first setiferous coxal tubercles ahead of second and near anterior end of coxa; second setiferous coxal tubercles well ahead of line across third. Abdominal thanosome with about 56 rings; microtubercles on all rings, these structures elongate dorsally, beadlike ventrally anteriorly but becoming more elongate after passing second ventral seta. Lateral seta 18 μ long, on about ring 7 behind shield; first ventral seta 55 μ long, on ring 17; second ventral 30 μ long, on ring 36. Telosome with 6 rings, completely microtuberculate, these structures resting on margins, smaller, somewhat acute and with anterior elongations. Telosomal seta 12 μ long. Accessory seta 3 μ long. Female genitalia 17 μ wide, 12 μ long; coverflap more posteriorly acuminate than usually, with 10-12 longitudinal ribs, the rear borders lined; seta 10 μ long.

Type locality: Karachi, Pakistan (Tando Jam, Rawalpindi)

Collected: Feb. 19, 1966 and sent to the the U. S. Entomology Research Div.,
by M. A. Ghani.

Host: *Pongamia glabra* Vent. (Leguminosae)

Relation to host: the mites produce leaf galls

Type material: there are seven slides with the above data
one is selected as the type
the others are paratypes

The specimens were sent under Mr. Ghani's #577, and the Ent. Res. Service #66-6943.

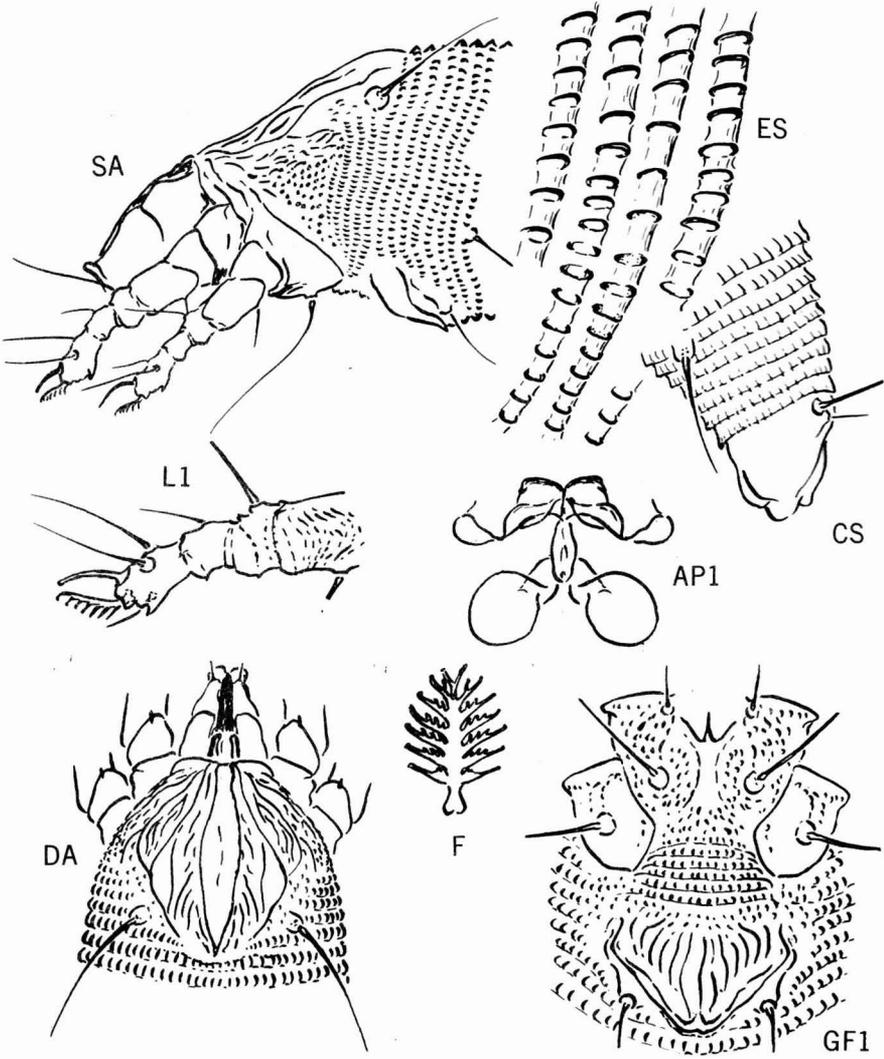


Plate 7 - *Aceria pongamiae*, new species

Aceria ghanii, new species

Plate 8

Ghanii is probably best defined as distinct from other species with 7-rayed featherclaws and rounded microtubercles by details of the shield pattern. The strongly recurved second submedian lines on the anterior half of the shield, and the cell or cells in front of the dorsal tubercles are characteristic.

Female 140 μ -180 μ long, 35 μ -40 μ thick; wormlike; color in life probably light yellowish-white. Rostrum 20 μ long, somewhat curved down; antapical seta 5 μ -6 μ long. Shield 25 μ long, 30 μ -35 μ wide; subsemicircular in anterior outline. Median shield line present on rear 3/4, meeting inward lines from admedians just ahead of rear margin; admedians complete, sinuate, gently diverging but curved in toward rear, especially past cross lines. First and second submedians curving out from anterior side of admedians and recurving back to admedians just before 1/2, then followed by lines forming one or two cells ahead of dorsal tubercles. Lateral shield lines from side of second submedian extending back to rear margin below dorsal tubercles and forming 2 or 3 diagonal cells. A granular band above coxae and 2 or 3 partial rings below dorsal tubercles. Dorsal tubercles 19 μ -21 μ apart; dorsal setae 23 μ long. Foreleg 25 μ long; tibia 4 μ long, with 6 μ seta at 1/3; tarsus 6 μ long; claw 8.5 μ long; featherclaw 7-rayed. Hindleg 23 μ long, tibia 3.5 μ long, tarsus 5.5 μ long, claw 6.5 μ long. Coxae but slightly ornamented; moderately strong sternal line at connation of anterior coxae; first setiferous coxal tubercles slightly farther apart than second and opposite anterior coxal approximation; second tubercles well ahead of line across third tubercles. Abdominal thanosome with about 54 rings, completely microtuberculate, the microtubercles rounded apically, elongate behind shield, beadlike laterally and to rear, tending to ad dorsally toward rear. Lateral seta 16 μ long, on ring 6 behind shield; first ventral seta 70 μ long, on ring 16, second ventral 10 μ long, on ring 31. Telosome with 5 rings, the microtubercles somewhat elongate, fine, fading dorsally; seta 26 μ long. Accessory seta 4 μ long. Female genitalia 19 μ wide, 12 μ long; with about 10 longitudinal ribs on the coverflap; seta 55 μ long. Microtubercles to side and rear of genitalia tending to be pointed.

Type locality: Rawalpindi, Pakistan

Collected: November 14, 1965, and sent to the U. S. Entomology Research Division by M. A. Ghanii, for whom I am naming the species.

This collection is Mr. Ghanii's #581, U. S. D. A. #66-6943

Host: Zizyphus mauritiana Lam. (Rhamnaceae)

Relation to host: the mites form twig galls

Type material: there are six slides with the above data
one is designated the type
the others are paratypes

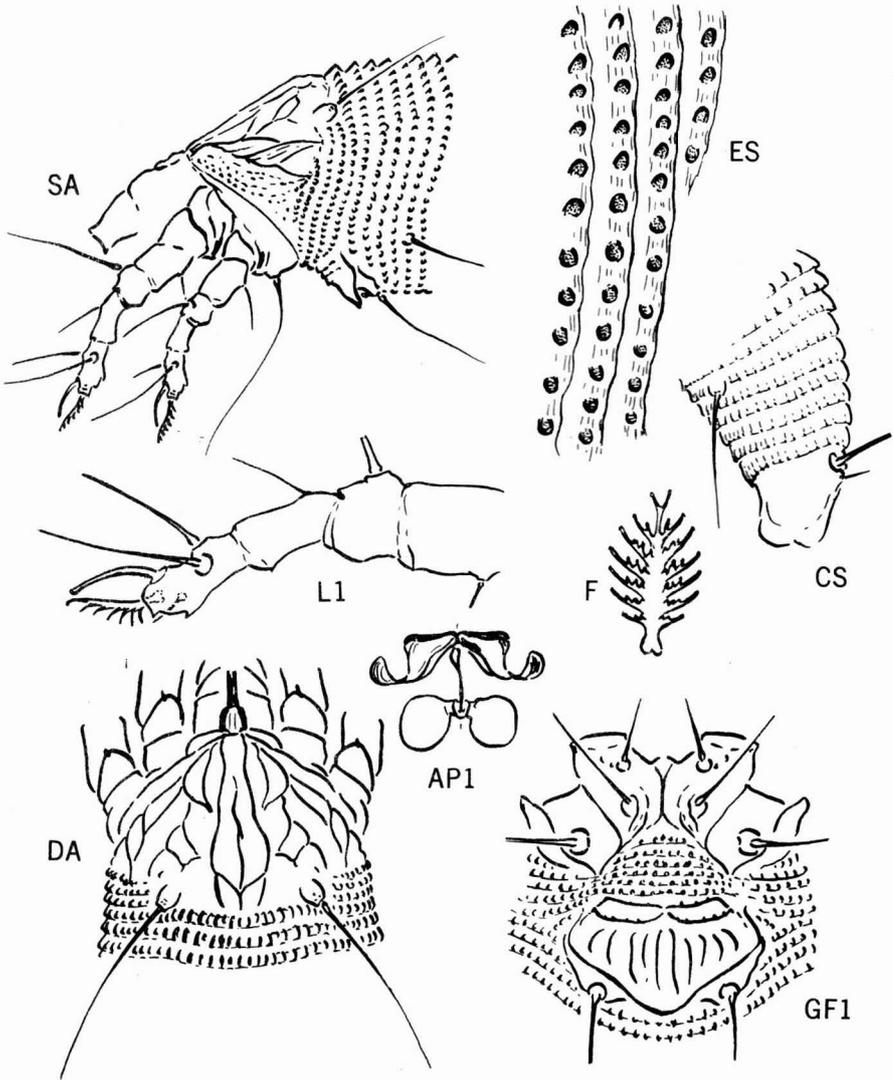


Plate 8 - *Aceria ghanii*, new species

Aceria cybonyx, new species

Plate 9

In common with *Aceria paracatalinae* K. the new species has a 3-rayed featherclaw, and both species occur on *Eriogonum*s. The new species differs by possessing smaller microtubercles and more partial rings below the dorsal tubercles. Markings on the female coverflaps also differ.

Female 175 μ -190 μ long, 45 μ thick; wormlike in shape; color light yellowish-white. Rostrum 21 μ long, curved down; antapical rostral seta 5 μ long. Shield 28 μ long, 30 μ wide; subsemicircular in anterior outline. Shield design not clear except for median and admedians just ahead of rear margin; sides of shield above coxae with longitudinal granular area and the two anterior partial rings tending to curve forward slightly on upper ends. Dorsal tubercles 18 μ apart; dorsal setae 30 μ long, diverging to rear. Forelegs 29 μ long; tibia 5 μ long, with 4 μ seta at 1/2; tarsus 8 μ long; claw 9 μ long; featherclaw 3-rayed. Hindleg 26 μ long, tibia 4 μ long, tarsus 7 μ long, claw 10.5 μ long. Junction of anterior coxae long, the coxae not projecting much ahead of anterior approximation; first setiferous coxal tubercles well ahead of second and slightly ahead of anterior approximation of coxae; second tubercles ahead of line across third setiferous coxal tubercles. Abdominal thanosome with about 53 rings, completely microtuberculate, the microtubercles rounded and mostly ahead of ring margins. Lateral seta 20 μ long, on ring 7 behind shield; first ventral seta 45 μ long, on ring 18; second ventral 30 μ long, on ring 32. Telosome with 5 rings, the dorsal microtubercles tending to be pointed; seta 18 μ long. Accessory seta minute. Female genitalia 18 μ wide, 12 μ long; coverflap with a strong line parallel to rear margin on each side and with unclear transverse lines anterior to this line; seta 23 μ long.

Type locality: At highway 50 just south of Folsom, Cal.

Collected: August 25, 1965, by the writer

Host: *Eriogonum latifolium nudum* (Dougl.) (Polygonaceae) wild buckwheat

Relation to host: the mites live at the petiole bases at ground level

Type material: a type slide with the above data
four paratype slides

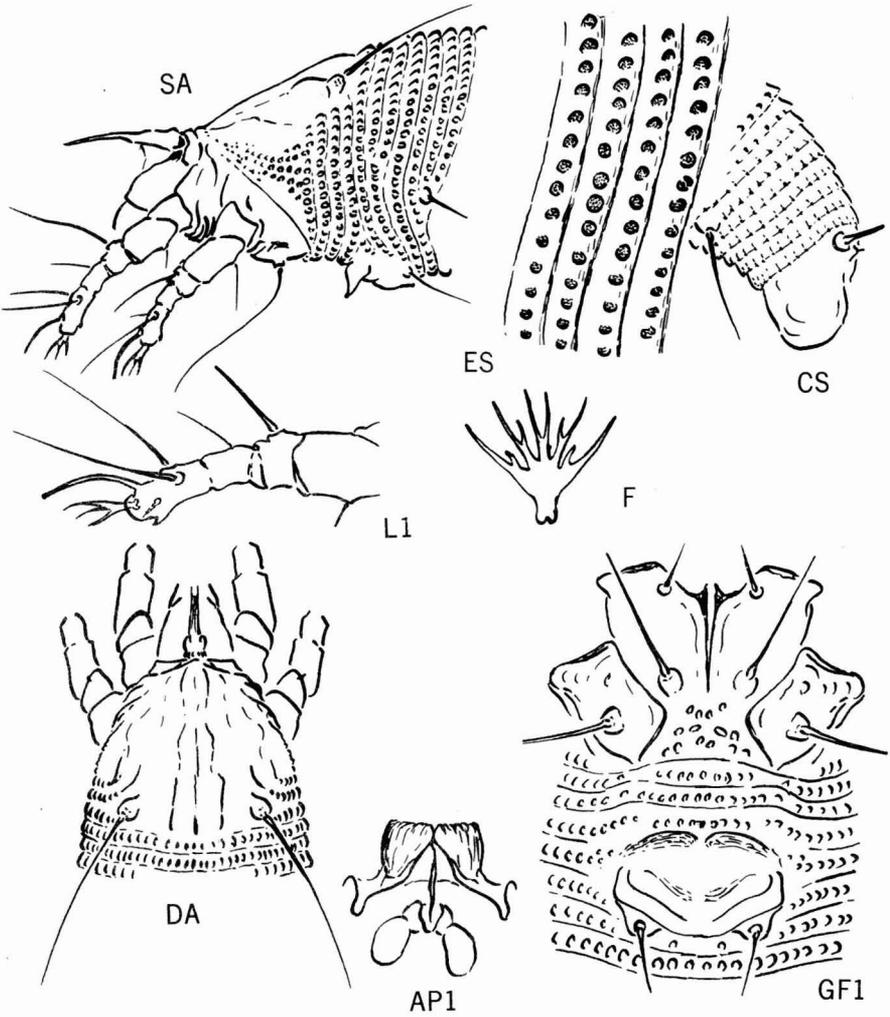


Plate 9 - *Aceria cybonyx*, new species

Acalitus santaluciae, new species

Plate 10

santaluciae is more comfortable in *Acalitus* than in *Aceria* due to the lack of the fore femoral seta and the foretibial seta. The forecoxae are also not definitely separated centrally by a sternal line. But the spine on the lower side of the fore femur is absent and the forecoxae are not as much fused as on typical *Acalitus* spp.

Female 190 μ -240 μ long, about 35 μ thick; wormlike; color light yellowish-white. Rostrum 18 μ long, curved down; antapical seta absent, subbasal seta more prominent. Shield 23 μ wide, 27 μ long; design or pattern absent; some partial rings and microtubercles below dorsal tubercles on side. Dorsal tubercles 16 μ apart; dorsal setae 35 μ long, diverging to rear. Forelegs 25 μ long; forefemoral seta missing; tibia 4 μ long, seta missing; tarsus 6.5 μ long, inner seta shorter than outer; claw 9 μ long; featherclaw 4-rayed. Hindleg 23 μ long, with forefemoral seta; tibia 3.5 μ long, tarsus 6 μ long, claw 10 μ long. Coxae with no ornamentation, no sternal line defining junction of anterior coxae, but a reversed V-shaped mark at rear junction followed by a short dash; first coxal setiferous tubercles about as far apart as second and ahead of anterior coxal approximation; second tubercles a little inside a diagonal line drawn through first and third tubercles. Abdominal thanosome with about 64 rings, completely microtuberculate; microtubercles rounded but somewhat produced, more or less ahead of rear ring margins. Lateral seta 23 μ long, on ring 7 behind shield; first ventral seta 48 μ long, on ring 19; second ventral 48 μ long, on ring 33. Telosome with about 8 rings, the microtubercles fading laterally and dorsally to rear, not elongate ventrally; seta 14 μ long, stout. Female genitalia 16 μ wide, 10 μ long; coverflap without ribs or markings, a transverse groove separates basal part from posterior part; seta 5 μ long. Minute accessory seta.

Type locality: China Camp, northern Santa Lucia mountains in Monterey County Cal. Elevation 4600 feet.

Collected: May 29, 1966, by J. P. Keifer and the writer

Host: *Arctostaphylos* sp. (Ericaceae) manzanita

Relation to host: the mites occur on the fruit stalks, especially in terminal buds, when present. They may stunt the stalk at times.

Type material: a type slide with the above data
five paratype slides
a small amount of dry plant parts with dried mites.

Designations on plates -

- API - Internal female genital structures
- CS - Telosome and anal lobes, side view of caudal section
- D - Dorsal view of mite
- ES - Side skin structures
- F - Featherclaw (empodium)
- GF1 - Female genitalia and coxae
- L1 - First left leg
- S - Side view of mite
- SA - Side view of anterior section of mite

Thanosome - that part of the abdomen ahead of the third ventral seta
Telosome - the abdomen from the third ventral seta to anal lobes

The 'E' series of Eriophyid Studies are issued as special publications of the Bureau of Entomology, California Department of Agriculture. Copies are obtainable by writing to the Bureau, 1220 'N' St., Sacramento 95818

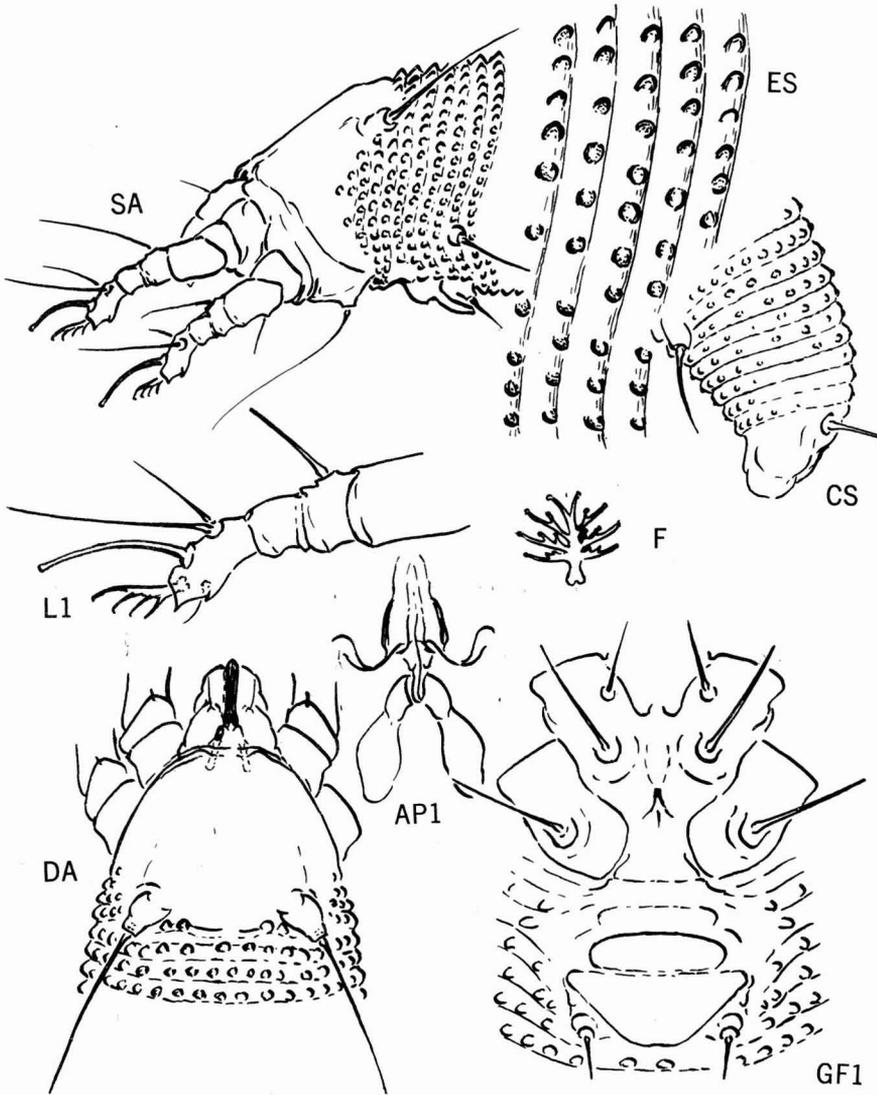


Plate 10 - *Acalitus santaluciae*, new species